

RELEASABLE, REPEATABLE ELECTRICAL CONNECTION EMPLOYING
COMPRESSION

ABSTRACT

An electrical connection of a transfer station releasably,
5 repeatably electrically couples with respect to a matching
connection of a portable cartridge. A substrate in the portable
cartridge has electrical contacts on a facing surface. In the
transfer station, a matching circuitized flexible substrate has
electrical contacts on a facing surface thereof, which are
10 arranged to match the portable cartridge electrical contacts when
in a face-to-face relationship. An elastomeric compression
element, at the rear of the matching substrate, has individual
protruding compression members contacting the rear surface and
registered with corresponding individual electrical contacts.
15 Elongated electrical contacts are registered with two adjacent
individual compression members. A loader engages the portable
cartridge, registering the cartridge substrate contacts in
face-to-face relation with the matching flexible substrate
electrical contacts, and exerting a normal force to the cartridge
20 to compress the compression element and create non-wiping contact
between the facing electrical contacts.